State Revolving Fund Loan Programs

Drinking Water, Wastewater, Nonpoint Source

ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

CITY OF COLUMBUS
NEW WASTEWATER TREATMENT PLANT
SRF PROJECT WW08 09 03 04

DATE: January 29, 2008

COMMENTS MUST BE RECEIVED BY: March 1, 2008

I. INTRODUCTION

The above entity has applied to the Clean Water State Revolving Loan Fund (SRF) for a loan to finance all or part of the wastewater project described in the accompanying Environmental Assessment (EA). As part of facilities planning requirements, an environmental review has been completed which addresses the project's impacts on the natural and human environment. This review is summarized in the attached EA.

II. PRELIMINARY FINDING OF NO SIGNIFICANT IMPACT (FNSI)

The SRF Clean Water Program has evaluated all pertinent environmental information regarding the proposed project and determined that an Environmental Impact Statement is not necessary. Subject to responses received during the 30-day public comment period, and pursuant to Indiana Code 4-4-11, it is our preliminary finding that the construction and operation of the proposed facilities will result in no significant adverse environmental impact. In the absence of significant comments, the attached EA shall serve as the final environmental document.

III. COMMENTS

All interested parties may comment upon the EA/FNSI. Comments must be received at the address below by the deadline date above. Significant comments may prompt a reevaluation of the preliminary FNSI; if appropriate, a new FNSI will be issued for another 30-day public comment period. A final decision to proceed, or not to proceed, with the proposed project shall be effected by finalizing, or not finalizing, the FNSI as appropriate. Comments regarding this document should be sent within 30 days to:

Max Henschen
Senior Environmental Manager
State Revolving Fund -- IGCN 1275
100 N. Senate Ave.
Indianapolis, IN 46204
317-232-8623

ENVIRONMENTAL ASSESSMENT

I. PROJECT IDENTIFICATION

Project Name and Address:	Columbus City Utilities New Wastewater Treatment Plant 1101 McClure Road, PO Box 1987 Columbus, IN. 46202-1987
SRF Project Number:	WW08 09 03 04
Authorized Representative:	Keith L. Reeves Director of Utilities

II. PROJECT LOCATION

Columbus City Utilities is in Bartholomew County and serves a majority of Columbus. The study area and 20-year service area are identical (Figure 1); the 20-year service area includes areas of potential annexation, as well as future service areas of regional sewer districts and sewer utilities currently served by the Columbus Wastewater Treatment Plant (WWTP). The proposed site for the new WWTP is located in Section 1, Township 8 North, Range 5 East in the Columbus USGS Quadrangle.

III. PROJECT NEED AND PURPOSE

The existing WWTP has several problems: The majority of the main process equipment has reached the end of its useful life. The Rotating Biological Contactors (RBC) do not remove enough ammonia to consistently meet the effluent limits required by the city's National Pollutant Discharge Elimination System Permit (NPDES). There are persistent odors from the head works, primaries, and anaerobic digesters. The anaerobic digesters have also experienced failure of the floating covers; a Biosolids Management Study has recommended upgrading the anaerobic digesters to a high temperature aerobic process that would produce a Class A sludge. The existing WWTP has limited peak capacity. Growth projections indicate that the WWTP average design flows will grow up to 14.0 million gallons per day (MGD) and to 39.0 MGD peak flow. The existing WWTP would need to be expanded to accommodate the anticipated growth; however, the concrete tanks have severe structural deterioration, which would make WWTP expansion very expensive. Finally, the existing plant location compromises the city's proposed riverfront development plan.

IV. PROJECT DESCRIPTION

The new WWTP consists of an oxidation ditch system with secondary clarifiers, aerobic digestion, mechanical fine screens, mechanical dewatering, aerated solids holding tank, and ultra-violet disinfection; the treated effluent will discharge to the East Fork White River. This facility will also include the Cannibal™ solids reduction process that will condition a portion

of the return activated sludge (RAS) to biodegrade in a side stream reactor prior to reintroduction into the aeration basins. The Cannibal™ process greatly reduces the amount of biosolids generated by excluding fine screenings and grit and by accomplishing a degree of digestion within the process. The primary biosolids disposal system will be land application; hauling to a landfill will be the secondary disposal system. See Figures 2 and 3.

The new WWTP will include the following sustainable infrastructure/green infrastructure improvements: The 3rd and 4th passes of the oxidation ditch will operate at zero dissolved oxygen levels which will allow for the staging area for the Cannibal™ process. The Cannibal™ process will reduce sludge disposal requirements by 80 percent. All electrical components will help reduce electrical usage by 20 percent by utilizing variable frequency drives (VFD), geothermal heating and air conditioning for the administration building, heat recovery make-up air units, high efficiency air conditioning units, insulated glass, high R-value insulation and various other building components. It is estimated that the city has included approximately 20 percent of the project construction costs on sustainable infrastructure and green infrastructure work.

V. Estimated Project Costs, Affordability and Funding

A. Selected Plan Estimated Cost Summary

Construction Costs:

Headworks	$ 6,091,000
Oxidation Ditches	11,117,000
Secondary Clarifiers	5,330,000
RAS/WAS Structure	2,123,000
Cannibal™ Reactors	5,392,000
Disinfection Structure	2,018,000
Dewatering Building	4,752,000
Site Piping	4,500,000
Administration Building	911,000
Maintenance Building	634,000
Site Electrical and Generator	2,600,000
Outfall Sewer	1,150,000
Site Work	2,600,000
Instrumentation and Controls	2,000,000
Bonds, Mobilization, General Conditions	3,800,000
Aerobic Digesters	997,000
Flow Splitting Structure	300,000
Biosolids Storage Structure	110,000
Existing Headworks Modifications	663,000
Recycle Pump and Equalization Station	332,000
Construction Subtotal	$57,410,000
Contingency	5,590,000
Construction Cost Subtotal	$63,000,000

Non-Construction Costs

Design	$ 3,700,000
Construction Engineering	1,900,000
Construction Observation, O&M Services and Plant Start-up	2,580,000
Administration, Legal, etc.	820,000
Non-Construction Cost Subtotal	9,000,000
Total Estimated Project Cost	**$72,000,000**

B. Columbus will finance the project with a 20-year loan from the State Revolving Fund Loan (SRF) program for approximately $72,000,000 at an interest rate to be determined at the time of loan closing. Monthly user rates and charges may need to be analyzed to determine if adjustments are required for loan repayment.

VI. Description of Evaluated Alternatives

No Action: The no-action alternative would keep the existing plant operating with old equipment on a site that would not allow for expansion to provide proper treatment to the projected wet weather peak flows of 39 MGD. Therefore, this alternative was rejected.

Construct New Treatment Plant: Constructing a new plant is the cost-effective solution and will position Columbus to properly treat projected wet weather peak flows and future 20 year projected base flows. This is the selected plan.

VII. Environmental Impacts of the Feasible Alternatives

A. Direct Impacts of Construction and Operation

Undisturbed/Disturbed Land: The project will occur on agricultural land and other land which has not been significantly disturbed by previous construction activity. Reconnaissance level archaeological surveys were conducted on the treatment plant site and the effluent line route to East Fork White River.

Structural Resources: (Figure 4): The proposed project will not affect historic sites. Audible, atmospheric or visual effects of the project construction and operation will be temporary. The SRF's finding pursuant to Section 106 of the National Historic Preservation Act is: "no historic properties affected."

Wetlands and Surface Water (Figure 5): The proposed treatment plant's effluent line to the East Fork White River will cross a small palustrine wetland, as well as a small section of forested wetland at the river's edge. The East Fork White River is listed by the Indiana Natural Resource Commission as an Outstanding River, i.e., a stream with particular environmental or aesthetic interest. The East Fork White River is also listed by the National Park Service on its 2004 National River Inventory, as possessing one or more Outstandingly Remarkable Values relating to cultural, natural and recreational resources.

100-Year Floodplain (Figure 6): The proposed effluent line will be in the 100-year floodplain, but will not displace floodwaters.

Groundwater: The proposed project will not negatively affect a sole source aquifer or other groundwater resources.

Plants and Animals: The proposed project will not affect endangered plants or animals. Some small trees and shrubs will be removed to install the effluent line.

Prime Farmland: The project will convert 41.5 acres of farmland, of which 17.6 acres are prime/unique farmland.

Air Quality: Air quality will be temporarily impacted by construction activities, including vehicle exhaust and dust.

Open Space and Recreational Opportunities: The proposed project will neither create nor destroy open space and recreational opportunities.
The proposed project will not affect National Natural Landmarks.

B. Indirect Impacts

The city's Preliminary Engineering Report (PER) states: *The City of Columbus, through the authority of its Council, planning commission, or other means, will ensure that the future development, as well as future collection system, storage or sewage treatment works projects connecting to SRF-funded facilities, will not adversely impact wetlands, archaeological or historical, or structural resources, or other sensitive environmental resources. The city will require new development and associated utility infrastructure projects to be constructed within the guidelines of the USFWS, IDNR, IDEM, and other environmental review authorities.*

C. Comments from Environmental Review Authorities

This document is the first notice to the U.S. Fish and Wildlife Service and the IDNR Environmental Unit.

The IDNR Division of Historic Preservation and Archaeology, in correspondence dated December 5, 2008, stated: *In terms of archaeology, we concur with the archaeological report that sites 12B1463 and 14B1418 do not appear eligible for inclusion in the National Register of Historic Places. No further archaeological investigations are necessary provided that sites 12B1334, 12B1411, 12B1435, 12B1457, 12B1458, and 12B1465 are avoided by all project activities. If any archaeological artifacts, features, or human remains are uncovered during construction, state law (Indiana Code 14-21-1-27 & 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days*

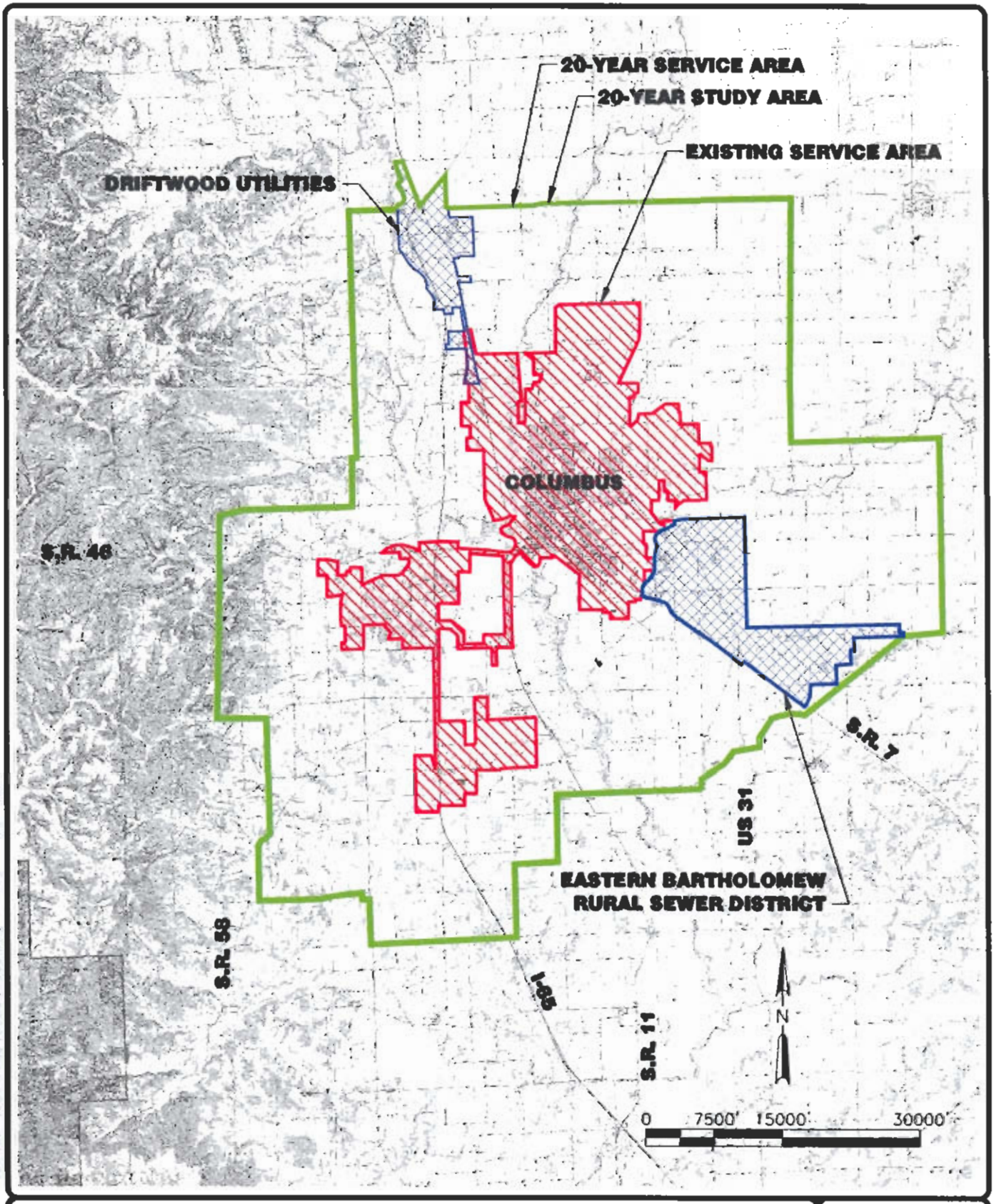
The Natural Resources Conservation Service (NRCS), in correspondence dated December 19, 2007, noted that the project would cause a conversion of prime farmland. Out of 41.5 acres affected by the proposed project, 17.6 acres were determined by the NRCS to be prime/unique farmland.

VIII. Mitigation Measures

The city's PER states: *Any mitigation measures to lessen wetland impacts cited in the comment letter from the Indiana Department of Natural Resources (IDNR) and the United States Fish and Wildlife Service (US Fish and Wildlife Service) will be implemented if feasibly possible. No long-term erosion, siltation, air quality, or odor impacts are expected from this project. Short-term erosion and siltation impacts will be controlled and monitored by the contractor during the installation and construction of the WWTF* (Wastewater Treatment Facility) *and outfall sewer.*

IX. Public Participation

A properly noticed Public Hearing was held on March 13, 2008 at 6:30 pm in Columbus Council Chambers at 123 Washington Street. There were no objections to the project at the public hearing. There were no adverse written comments received by the utility during the 5-day comment period following the hearing.

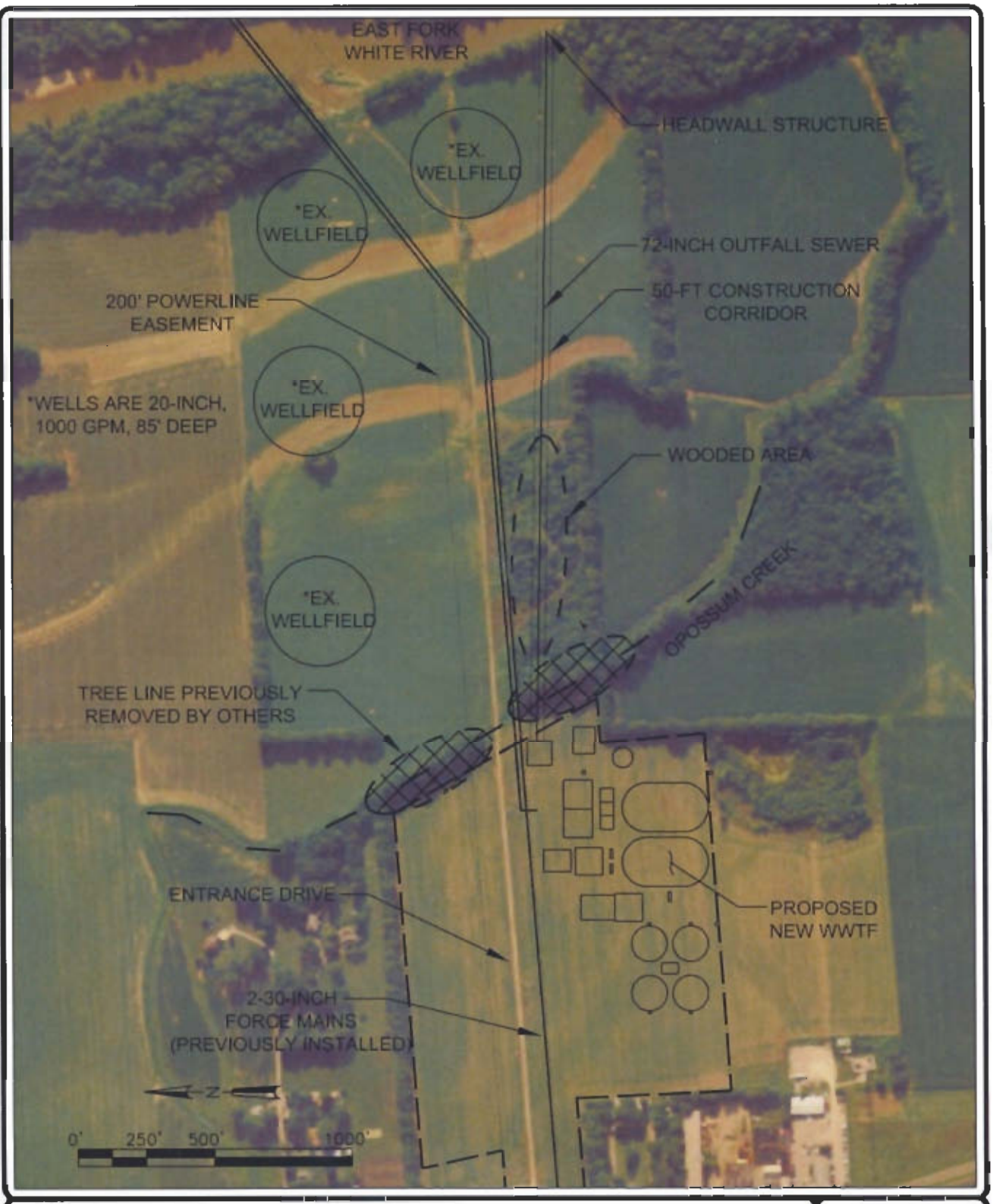


EXISTING AND 20-YEAR STUDY AND SERVICE AREAS

NEW WASTEWATER TREATMENT FACILITY
PRELIMINARY ENGINEERING REPORT
COLUMBUS CITY UTILITIES
COLUMBUS, INDIANA

STRAND ASSOCIATES, INC.® ENGINEERS

FIGURE 1



SELECTED PLAN SITE LAYOUT

NEW WASTEWATER TREATMENT FACILITY
PRELIMINARY ENGINEERING REPORT
COLUMBUS CITY UTILITIES
COLUMBUS, INDIANA

STRAND ASSOCIATES, INC.
ENGINEERS

FIGURE 2

REVISED 6-18-08

File: S:\@SIECO\001--050\021\059\Acad\Preliminary Design Drawings\Piping Layout.dwg Time: Jun 19, 2008 - 9:58am

SELECTED PLAN PRELIMINARY LAYOUT

NEW WASTEWATER TREATMENT FACILITY
PRELIMINARY ENGINEERING REPORT
COLUMBUS CITY UTILITIES
COLUMBUS, INDIANA

STRAND ASSOCIATES, INC.® ENGINEERS

FIGURE 3

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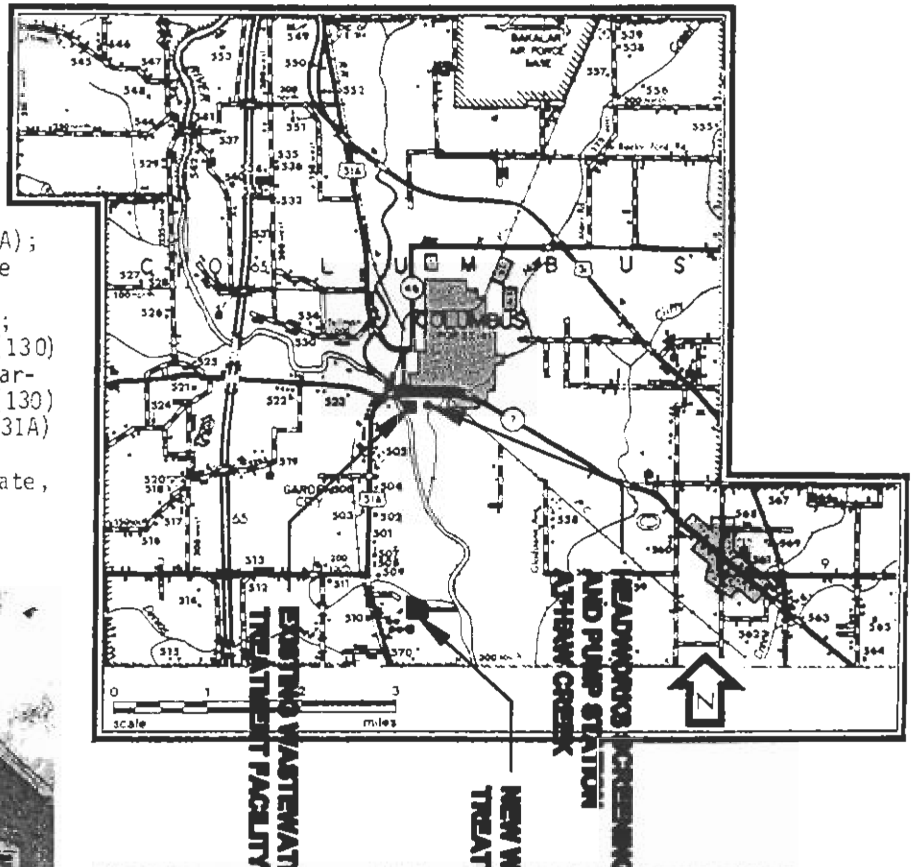
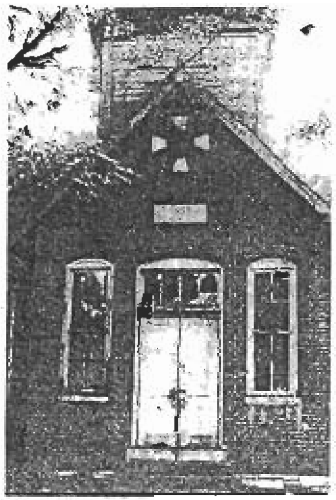
Columbus Twp

#	Rtg.	Description
0501	R	GARDEN CITY CHURCH OF CHRIST, 1425 S. Jonesville Rd. (U.S. 31A); Carpenter-Builder, 1911; Architecture, Religion, Construction (130)
0502	N	COTTAGE, 1185 S. Jonesville Rd. (U.S. 31A); Carpenter-Builder, c. 1890; Architecture (130)
0503	N	HOUSE; 1150 S. Jonesville Rd. (U.S. 31A); Carpenter-Builder, c.1890; Architecture (130)
0504	N	COTTAGE, S. Jonesville Rd. (U.S. 31A); Carpenter-Builder, c.1880; Architecture (130)
0505	R	GLANTON CEMETERY, S. Jonesville Rd. (U.S. 31A) c. 1840; Settlement (130)
0506	R	GEORGE GABBERT HOUSE, Rd. 100 S; Italianate, 1872; Architecture (130)

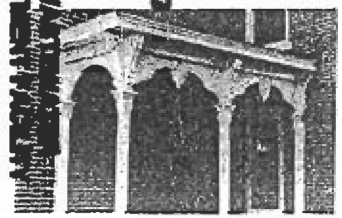



0515


0512


0518


0510


0508

38

HISTORICAL MAP

NEW WASTEWATER TREATMENT FACILITY
PRELIMINARY ENGINEERING REPORT
COLUMBUS CITY UTILITIES
COLUMBUS, INDIANA

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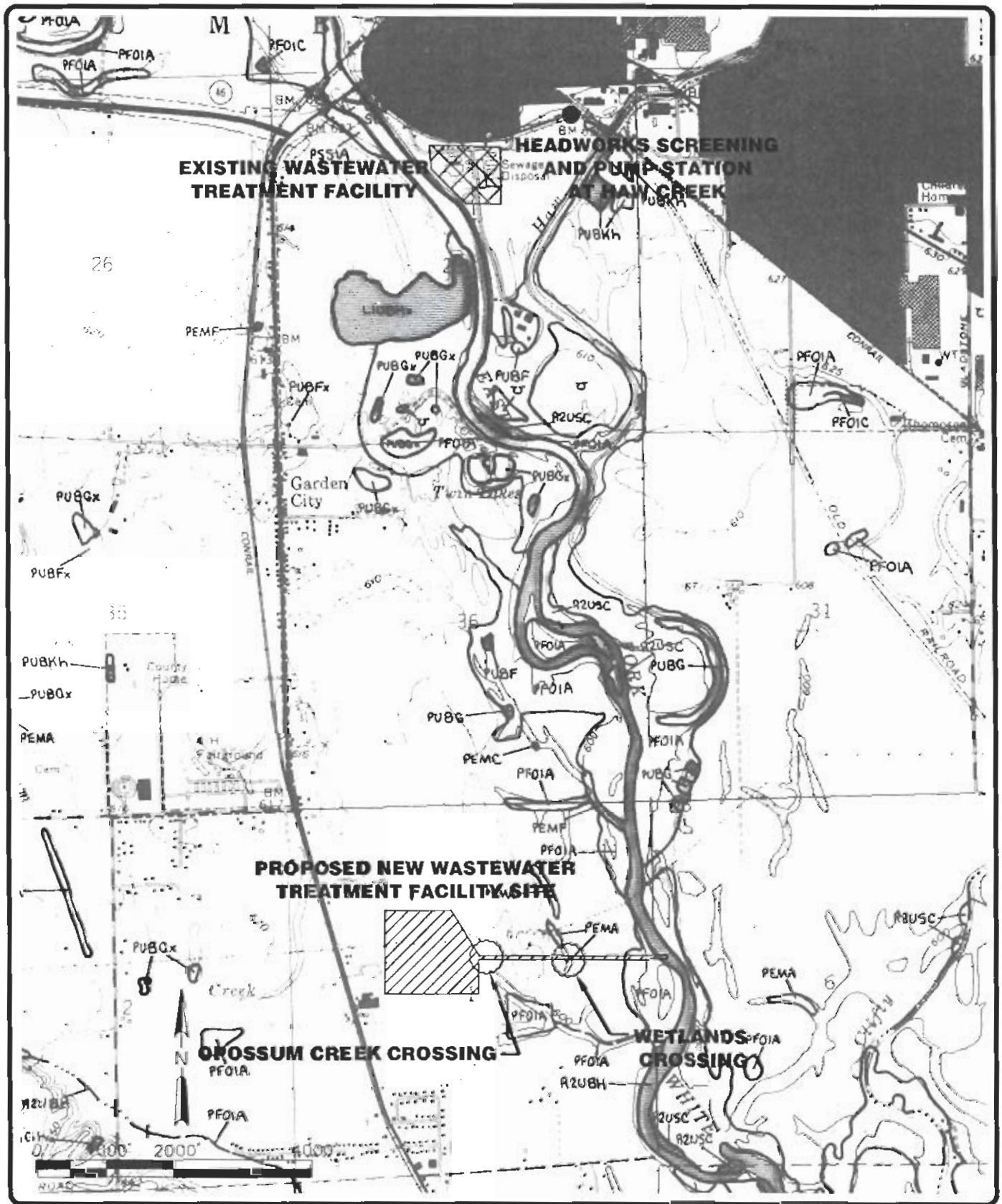
FIGURE 4



WETLANDS MAP

NEW WASTEWATER TREATMENT FACILITY
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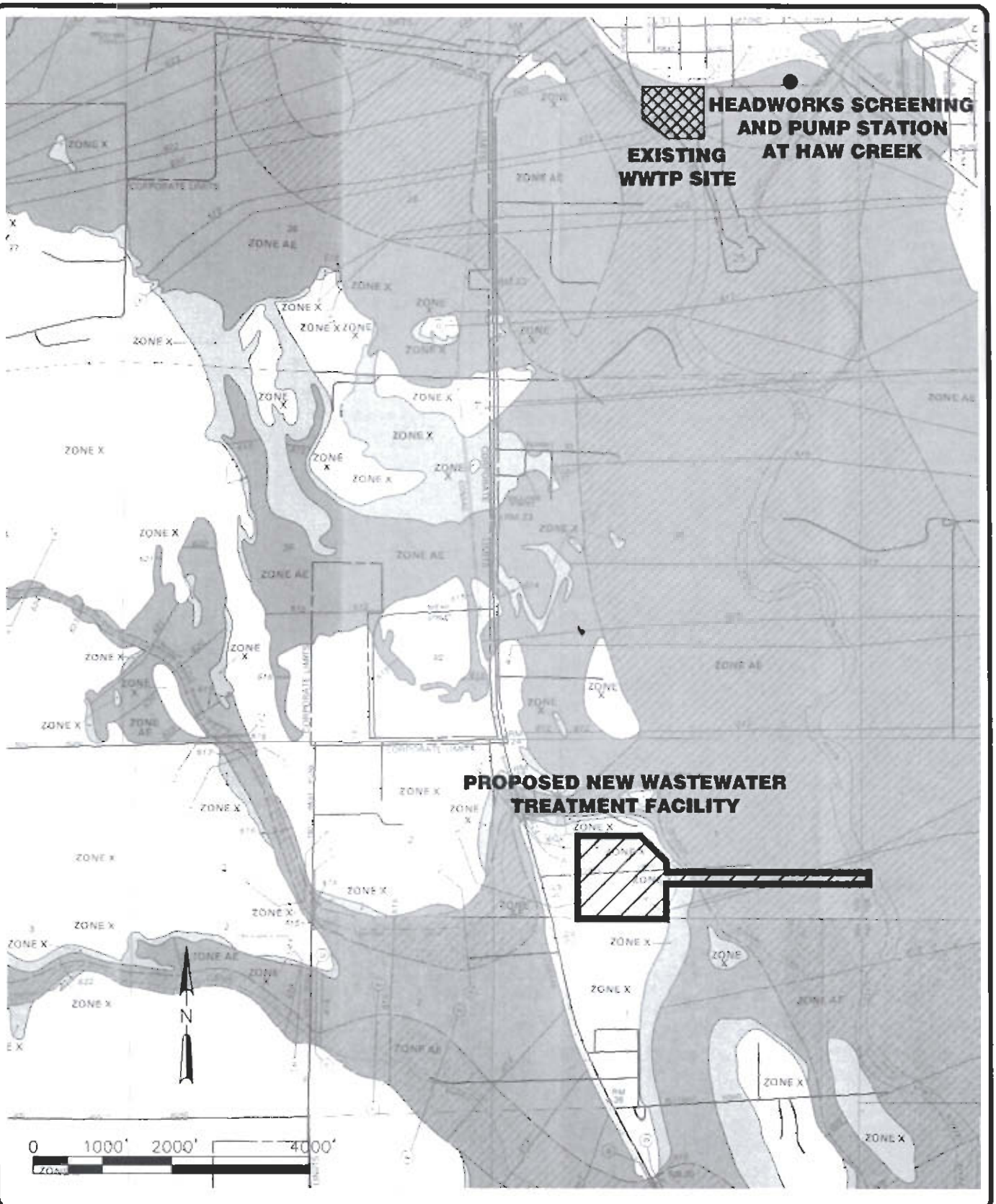
FIGURE 5



FLOOD INSURANCE RATE MAP (FIRM)

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FIGURE 6